

Application Number 10/072,125
Responsive to Office Action of January 6, 2004

REMARKS

This paper is responsive to the Office Action mailed January 6, 2004. Applicants have not amended any claims. Claims 25-43 are still pending.

In the Office Action, the Examiner rejected claims 25-29 and 35-38 under 35 U.S.C. 102(b) as being anticipated by Seo et al. (JP-408180351 A) (hereafter Seo); and rejected claims 30-34 and 39-43 under 35 U.S.C. 103(a) as being unpatentable over Seo in view of Lacey et al. (US 5,793,480) (hereafter Lacey).

Applicants have carefully studied the applied prior art, as well as the arguments advanced by the Examiner. After careful consideration, Applicants respectfully traverse the rejections and respectfully request further consideration in view of the following comments.

All of Applicants' pending claims require separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously on the surface of the magnetic data storage tape. The applied references simply do not disclose or suggest these features. In particular, neither Seo nor Lacey discloses or suggests directing two or more beams onto a surface of magnetic tape to write at least two servo tracks in the servo pattern simultaneously on the surface of the magnetic data storage tape. Moreover, Lacy and Seo describe techniques performed on disk-shaped media and say absolutely nothing about techniques which can be performed on magnetic data storage tape, as required by Applicants' claims.

The rejection under 35 U.S.C. 102(b) - Anticipation by Seo

Examiner rejected claims 25-29 and 35-38 under 35 U.S.C. 102(b) as being anticipated by Seo. Applicants respectfully submit that these rejections are improper for at least two reasons.

First, Applicants' claims recite techniques that are performed with respect to *magnetic data storage tape*. Seo is concerned only with disk-shaped media, and provides absolutely no suggestion that the techniques described in Seo could be applied to magnetic tape. For this reason alone, the rejections under 35 U.S.C. 102(b) are improper and should be withdrawn.

In order to support an anticipation rejection under 35 U.S.C. 102(b), it is well established that a prior art reference must disclose each and every element of a claim. This well-known rule

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of law is commonly referred to as the "all-elements rule."¹ If a prior art reference fails to disclose any element of a claim, then rejection under 35 U.S.C. 102(b) is improper.²

Seo provides absolutely no suggestion that the techniques described in Seo could be applied to magnetic tape. Accordingly, the "all-elements rule" mandates that the current rejections under 35 U.S.C. 102(b) are improper and should be withdrawn.

Second, and even more importantly, Seo lacks any suggestion of a process in which a laser beam is separated and then directed onto a surface of magnetic data storage tape. As pointed out in Applicants' last response, Seo describes a process in which a laser beam is separated and then directed onto opposing sides of a disk-shaped medium. Seo clearly does not disclose or suggest directing the two or more beams onto a surface of the medium, i.e., a common surface, much less directing the two or more beams onto the surface of the magnetic data storage tape to simultaneously write at least two servo tracks in the servo pattern.

Seo also describes the separation of a laser beam to create different beams for illumination of different disk-shaped media. However, nothing in Seo suggests that any portion of laser beam is separated with respect to a specific side of a specific medium. In short, the techniques described in Seo contemplate the illumination of a given side of a given medium with a single laser beam spot for creation of a salient on the medium. Seo does not disclose or suggest directing the two or more beams onto a surface of the medium, as recited in Applicants' claims.

¹ See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (CAFC 1986) ("it is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention").

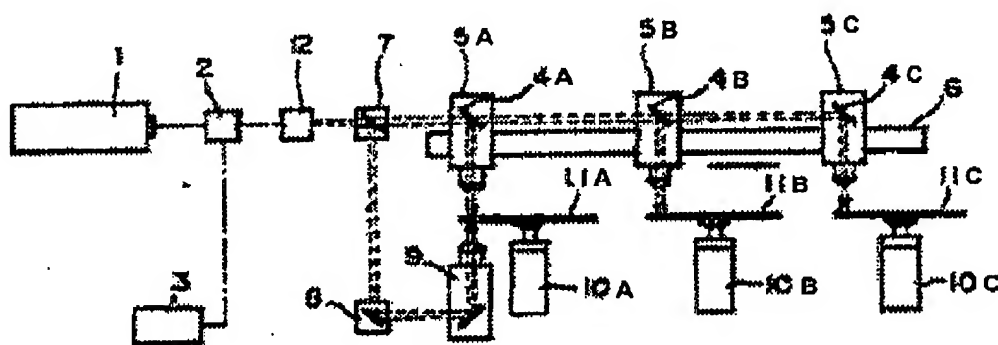
² *Id.* See also *Lewmar Marine, Inc. v. Bariant, Inc.* 827 F.2d 744, 3 USPQ2d 1766 (CAFC 1987); *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (CAFC 1990); *C.R. Bard, Inc. v. MP Systems, Inc.*, 157 F.3d 1340, 48 USPQ2d 1225 (CAFC 1998); *Oney v. Ratliff*, 182 F.3d 893, 51 USPQ2d 1697 (CAFC 1999); *Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 57 USPQ2d 1057 (CAFC 2000).

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The specific FIG. of Seo relied upon by the Examiner in rejecting Applicants' claims is copied below. Applicants have modified the number scheme of this FIG. for purposes of clarity, e.g., adding letters to distinguish elements 4A, 4B and 4C, 5A, 5B and 5C, 10A, 10B, and 10C, and 11A, 11B and 11C.

[FIG. 1]



This FIG. of Seo, relied upon by the Examiner, clearly shows that the features of Applicants' claims are not suggested by Seo. Moreover, the description of this FIG. within Seo is completely at odds with the Examiner's interpretation of the Seo reference.

All of Applicants' pending claims require separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously on the surface of the magnetic data storage tape. This is not disclosed or suggested by Seo.

In particular, element 5A focuses a single laser beam spot onto the top surface of disk-shaped medium 11A. Element 5B focuses a single laser beam spot onto the top surface of disk-shaped medium 11B. Element 5C focuses a single laser beam spot onto the top surface of disk-shaped medium 11C. Element 9 focuses a single laser beam spot onto the bottom surface of disk-shaped medium 11C. The entire specification of Seo makes it very clear that the laser beams in Seo are focused onto one or both sides of one or more media. Nothing in Seo suggests simultaneously illuminating a common side of a medium with two or more beams.

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In particular, nothing in Seo suggests separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously. In contrast, Seo illustrates and describes the separation of a laser beam to either illuminate the top and bottom sides of medium 11A, or the separation of a laser beam to illuminate one or both sides of different media 11A, 11B and 11C. Nothing in Seo suggests writing two or more servo tracks of a servo pattern simultaneously on a common side of the medium, as required by Applicants' claims.

In light of these clear differences between the language of Applicants' claims and the teaching of Seo, Applicants respectfully request reconsideration and withdrawal of all pending rejections. Seo provides absolutely no suggestion that the described techniques could be applied to magnetic tape. Moreover, Seo does not disclose or suggest separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously. For each of these reasons, Applicants respectfully submit that all pending rejections are improper and should be withdrawn.

The rejection under 35 U.S.C. 103(a) - Seo in view of Lacey

For the reasons outlined above, the rejections 35 U.S.C. 103(a) are also improper. In particular, neither Seo nor Lacey discloses or suggests techniques applied to magnetic data storage tape. Also neither Seo nor Lacey discloses or suggests separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously.

In addition to reasons outlined above, Applicants take further issue with the Examiner's rejections of dependent claims 30-34 and 39-43 under 35 U.S.C. 103(a).

The Examiner indicates that Seo does not disclose or suggest the use of specific types of lens or Wollaston prisms. However, the Examiner states that Lacey discloses these elements, and that it would have been obvious to incorporate the elements described in Lacey into the system described in Seo.

Applicants respectfully submit that the applied references lack any teaching that would have motivated a person with ordinary skill in the art to modify the teaching of Seo to use the

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elements described in Lacey. Seo and Lacey are completely unrelated teachings. Moreover, the Lacey reference has little or nothing in common with Applicants' claimed invention.

Lacey describes techniques for measuring small spacings and is specifically concerned with measurement of spacings between a transparent substrate and a reflective slider used to read information from the substrate. In this sense, Lacey is totally unrelated to the teachings of both Applicants' specification and the Seo reference. Consequently, a person with ordinary skill in the art at the time of Applicants' invention would not have even considered the Lacey reference relevant to the issues and problems addressed by Seo. Moreover, even if a person with ordinary skill in the art had become aware of both the Seo and Lacey references, neither reference provides any teaching that would have motivated a person with ordinary skill in the art to modify the teaching of Seo.

Also, with respect to claims 30-34 and 39-43, the Examiner appears to have failed to address a number of the recited features. As one example, claims 32 and 41 recite that the Wollaston prism is located between first and second lenses, and further wherein changing the distances between the Wollaston prism and the first and second lenses changes a divergence angle between the beams. As another example, claims 33 and 42 recite that power variations between the two or more beams are about 10% or less. As another example, claims 34 and 43 recite that the two or more beams diverge at a divergence angle, and wherein the method further comprises adjusting the divergence angle to obtain a desired servo track pitch. In the Office Action, the Examiner did not even address these features.

Claims 30 and 39 recite a Wollaston prism with an optical axis that is offset from the polarization vector of the source beam. The Examiner appears to have ignored the requirement of an offset optical axis. Claims 31 and 40 further recite that the optical axis of the Wollaston prism is offset from the polarization vector of the source beam by about 45 degrees. In rejecting this claim, the Examiner cited a passage of Lacey which indicates that 45 degree polarized light can be used in the space measurement techniques described in Lacey. This passage of Lacey, however, does not disclose that a Wollaston prism is offset from the polarization vector of the source beam by about 45 degrees, as recited in claims 31 and 40.

In short, Lacey is completely unrelated to Seo and a person with ordinary skill in the art would not have modified the teaching of Seo with that of Lacey without the benefit of Applicants'

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disclosure and hindsight. Moreover, contrary to the Examiner's assertion, Lacey does not even disclose many of the elements of claims 30-34 and 39-43.

For these additional reasons, Applicants respectfully submit that the rejections of dependent claims 30-34 and 39-43 are improper and should be withdrawn.

Conclusion

For at least the reasons set forth above, claims 25-43 are in condition for allowance. In particular, the applied references do not disclose or suggest any techniques which are performed on magnetic data storage tape. Also, the applied references lack any suggestion of separating the source beam of laser energy into two or more beams and directing the beams onto a surface of magnetic data storage tape to write at least two servo tracks in the servo pattern simultaneously, as recited in all pending claims. A variety of other features of Applicants' various dependent claims are also not disclosed in any of the applied references. Applicants do not acquiesce to any of the Examiner's characterizations of the applied references with respect to the features recited in Applicants' claims.

Applicants respectfully request reconsideration and prompt allowance of all pending claims for at least the reasons set forth above. Please charge any additional fees or credit any overpayment to deposit account number 09-0069. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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3/29/4

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